Effectiveness of Play Therapy on Aggression Regulation, Attention Span, and Self-help Skills among the children with Down syndrome

Synopsis

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1.0.0 INTRODUCTION

Human beings are the most beautiful creations of nature and God in this world since, in a broad sense, they All are identical, yet there are many differences between each and every human person, which we can observe in their appearance, nature, behaviours, qualities, colour, and belongings. People also believe that there is another distinction in human beings, namely those who operate according to predefined laws and have a standard set of dispositions, which are referred to as normal. There are a few so-called abnormal beings who are not normal, straying from the norm, and doing acts in unique ways- such as children with Down syndrome, Autism ADHD, Cerebral Palsy, Dyslexia and many more. After years of effort, the term "abnormal" was removed from their vocabulary, and they are now referred to as "special children." Autism Spectrum Disorder (ASD), Dyslexia, and Depression are examples of nongenetic disorders, whereas Fragile X syndrome, Turner syndrome, and Down syndrome are examples of genetic disorders (Wiseman, 2005).

Down Syndrome is caused when abnormal cell division results in an extra full or partial copy of chromosome 21. This extra genetic material causes the developmental changes and physical features of Down syndrome.

Down syndrome varies in severity among individuals, causing lifelong intellectual disability and developmental delays. It's the most common genetic chromosomal disorder and cause of learning disabilities in children. It also commonly causes other medical abnormalities, including heart and gastrointestinal disorders. According to MacLennan (2020), people with Down syndrome tend to have certain physical features in common. These may include: Eyes that slant up at the outer corner, small ears, flat noses, Protruding tongue, Tiny white spots in the coloured part of the eyes, short neck, small hands and feet, short stature, Loose joints, Weak muscle tone.

According to Aktar and Syed (2023) Down syndrome was first described by an English physician John Langdon Down in 1866, but its association with chromosome 21 was established almost 100 years later by DR. Jerome Lejeune in Paris. Historically, down syndrome situation, people with down syndrome were removed from general society and confined in institutions or colonies it was only in mid-20th century that parents, physicians, researchers and organisations supporting people with down syndrome start changing the in which they were viewed and treated by society such individuals have become

increasingly integrated into normal society. Now a days there are some organisations and institutions are working for them. As subsequently people are becoming more educated and informative about this disorder and such conditions of the individuals. So, now they can feel the sensitivity of the situation and society can take step to uplift them. Some organisations are working to improve their growth and development for children with down syndrome like in India there are federation/organizations 'down syndrome federation of India', Smile India trust NGO, association of people with disability and national down syndrome society. In India there are large number of populations is suffering from this syndrome based on surveys carried out at field level around 23000 to 29000 children are born with this syndrome every year (Toshi, 2023). Insufficient medical and educational facilities are the main reasons for the challenges faced by these children in our country. This section of the society is the last, the least, the lost and the lowest. So, researchers need to work for them. As we know that education is key to success, we need to educate them as our constitution provision article 45 states that "The state shall endeavour to provide free and compulsory education for all children until they complete the age of 14 years". People cannot assume that children with down syndrome can never be educated or talented they need special attention, gradually they can perform well or achieve success, here success does not mean that they can become millionaire or able to perform tasks perfectly like a so called normal human being. Nobody is perfect but we can take small steps for their growth and development. As Maslow's theory is about self-actualisation for this, we need to develop the basic ability among the children with down syndrome they need to be satisfied from their mental, physical and emotional situation that is why researcher wants to work with these three variables "Aggressions Regulation, Attention Span and Self- Help Skills". These three variables are very important for each individual either he /she is normal or abnormal.

It is important to note that all children with down syndrome will display the aggressive behaviour but many children with down syndrome struggle to understand and express their emotions in appropriate ways due to lack of social skills and communication difficulties. children with down syndrome may be more likely do experience anxiety and sensory processing issues which can lead to aggression additionally they face difficulty to express their needs and desire which can lead to frustration and aggressions. Thus, it is important to provide them environment that is conducted to learning and that encourages positive behaviour.

It is noticed that children with down syndrome do not have much concentration span or attention span, they distracted easily from a particular task, if we want them to work on particular activity there is need to provide them controlled environment to keep them away from the distraction so that children with down syndrome can complete the task with full concentration and can give their best (Majumder et al., 2015).

Children with down syndrome developed at a slower pace than typically developing children. They may require extra support and therapy to develop cognitive process such as attention, memory, language acquisition and thinking pattern and life management and social skills. This can be challenging for parents and care givers as it may require significant time and resources to provide the necessary support.

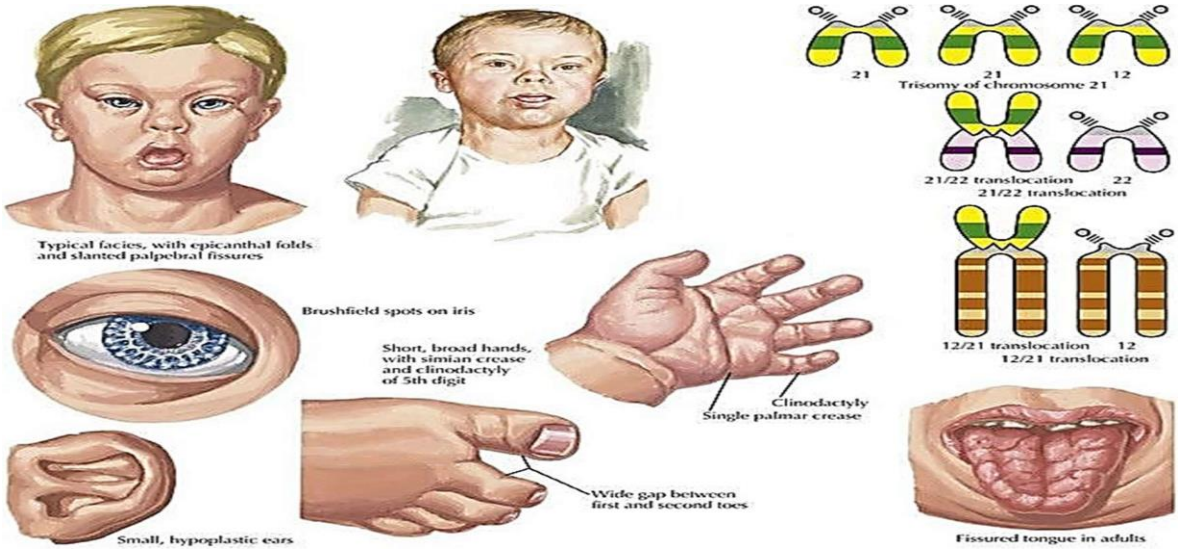

Fig. 1. Down syndrome Symptoms
(Source: https://www.camphill.org.za/articles/what-exactly-is-down-syndrome)

Down syndrome is a genetic disorder characterized by intellectual incapacity, a distinctive facial appearance, and low muscular tone (hypotonia) in infancy. Although all affected people exhibit cognitive impairments, the intellectual disability is usually low to moderate. People with Down syndrome frequently have a flattened appearance to the face, outside corners of the eyes that point upward (up slanting palpebral fissures), small ears, a short neck, and a tongue that sticks out of the mouth. Individuals who are affected may suffer a range of birth abnormalities. Many persons with Down syndrome have small hands and feet, as well as a single crease across their palms. A cardiac defect affects around half of all affected children. Digestive disorders, such as intestinal obstruction, are less prevalent. Individuals with Down syndrome is more likely to acquire a variety of medical issues. These

include gastroesophageal reflux, which is a drainage of acidic stomach contents into the oesophagus, and celiac disease, which is a gluten sensitivity. An underactive thyroid gland (hypothyroidism) affects about 15% of people with Down syndrome. The thyroid gland, located in the lower neck, is a butterfly shaped structure that generates hormones. Individuals with Down syndrome is also more likely to have hearing and visual difficulties. Furthermore, a tiny number of children with Down syndrome develop blood-forming cell cancer (leukaemia). Children with Down syndrome frequently have delayed development and behavioural issues. According to Asim et al, (2015), individuals with Down syndrome may experience growth issues, and their speech and language development may occur later and more slowly than children without Down syndrome. Furthermore, speech among people with Down syndrome may be difficult to comprehend. Attention problems, obsessive, compulsive behaviour, and stubbornness or tantrums are examples of behavioural challenges. A tiny proportion of people with Down syndrome are also diagnosed with autism spectrum disorders, which impede communication and social interaction. People with Down syndrome frequently endure a steady reduction in cognitive ability (thinking ability) as they age, usually beginning around the age of 50. Down syndrome is also linked to an increased risk of Alzheimer's disease, a brain ailment that causes a progressive loss of memory, judgment, and capacity to operate. Alzheimer's disease affects almost half of all persons with Down syndrome. Although Alzheimer's Reprinted from MedlinePlus Genetics (https://medlineplus.gov/genetics/) 2 disease is typically associated with older persons, people with Down syndrome frequently get this condition in their fifties or sixties.

Understanding and meeting the needs of children with Down syndrome is crucial for improving their general well-being and promoting their growth. While several therapies have been investigated, the distinctive benefits of play therapy in this context remain unexplored. This study aims to bridge that gap by evaluating the impact of play therapy on three critical aspects: attention span, aggression regulation, and self-help abilities.

1.1.0 Causes of Down Syndrome

Human cells normally contain 23 pairs of chromosomes. One chromosome in each pair comes from father, the other from mother. Down syndrome results when abnormal cell division involving chromosome 21 occurs. These cell division abnormalities result in an extra partial or full chromosome

21. This extra genetic material is responsible for the characteristic features and developmental problems of Down syndrome? (Harvey, 2004). Any one of three genetic variations can cause Down syndrome, these are-

Trisomy 21. About 95 percent of the time, Down syndrome is caused by trisomy 21 — the person has three copies of chromosome 21, instead of the usual two copies, in all cells. This is caused by abnormal cell division during the development of the sperm cell or the egg cell. Trisomy 21. As many as 95% of people with DS have this type. Every cell of their body has three separate copies of chromosome 21 instead of the regular two. Mosaic Down syndrome. In this rare form of Down syndrome, a person has only some cells with an extra copy of chromosome 21. This mosaic of normal and abnormal cells is caused by abnormal cell division after fertilization. This type affects about 2% of people with DS. These people have an extra chromosome only in some cells, while other cells have a regular chromosome count. Translocation Down syndrome. Down syndrome can also occur when a portion of chromosome 21 becomes attached (translocated) onto another chromosome, before or at conception. These children have the usual two copies of chromosome 21, but they also have additional genetic material from chromosome 21 attached to another chromosomes. The prevalence of this type is about 3%. It happens when an extra chromosome 21 gets attached to a different chromosome instead of being separate.

Down syndrome can have many effects, and it’s different for each person. Some will grow up to live almost entirely on their own, while others will need more help taking care of themselves.

Mental abilities vary, but most people with Down syndrome have mild to moderate issues with thinking, reasoning, and understanding. They’ll learn and pick up new skills their whole lives, but they may take longer to reach important goals like walking, talking, and developing social skills.

1.2.0 Play therapy

Mental health issues can have an impact on how children regulate their emotions, behave, and learn. They can benefit from therapy for a number of concerns. The aim is to determine the type of therapy that will improve a child's quality of life. However, because there are so many various forms of therapy, it is critical to understand which therapy works best for all of them. It is frequently stated that what children do not convey verbally, they do so through their play. Play benefits children's cognitive, physical, social, and emotional well-being. Children learn about the world and themselves via play. They

also gain the skills necessary to sustain connections.

Play therapy is a therapeutic approach that realizes the significance of play in child's growth and development and there are several purposes of incorporating play therapy into the interventions for children with Down syndrome. With the help of play therapy children with down syndrome, who may have face challenges in communication, can express themselves, share emotions and start interaction with others.

It promotes the extension of attention span of children with down syndrome, Which may particularly relevant for academic and daily living tasks. It will positively attack on their social skills and also focusing on the enhancement of self-help skills like (Dressing, Grooming and Personal hygiene). Froster the relationship and effective interventions and contributes to the child's overall emotional well-being. Play therapy can supportive and enriching environment to enhance various aspect of the child's development.

With the development of play therapy researcher wants manage the aggression and to increase the attention span of children with down syndrome and develop the self -help skill and self-care. It may help them in their future they will became self-sufficient.

1. Play therapy is a form of psychotherapy and can be effective in helping children through emotional and mental issues. Children often use play to express themselves and navigate the world and play therapy takes advantage of this. Play therapy is primarily used with children.

Although, it can also be used with adults (Rezaei and Hasanvand, 2020).

A play therapist will guide a person through play therapy in a free and safe environment where they feel most comfortable expressing themselves. Play therapists use play activities a child might enjoy from painting to dancing to board games. At times play therapist will ask other family members or parents and guardians to also get involved in the playtime activities. There are two main forms of play therapy used by play therapists-

According to (Goodyear-Brown, 2010) The difference between directive and non-directive approaches has led to the development of other models that incorporate both styles of engaging with a child.

1. Directive Play Therapy: With directive play therapy, the therapist takes a hands-on approach and leads the child through guided play activities to help them express themselves. They'll typically

give specific instructions and supervise the child as they go through it.

2. Non-directive Play Therapy: Non-directive play therapy makes use of a less controlled environment. The therapist leaves the child to engage in whatever play activities they might enjoy and express themselves with limited interference.

Play therapy session usually lasts between 30 and 45 minutes. During a play therapy session, the researcher will create a comfortable and safe environment for the child to play. The researcher will then observe the child's interactions with the toys that are provided (Setyowati and Pandin, 2021).

As the child grows more comfortable in the researcher's playroom, more specific play activities that target the issues the child is dealing with, will be introduced. Some of the most common techniques used by play researchers across the world include: Using building blocks, using art, Sand play, Board games, Play with dolls, Puppet play, Tea party play, Card games, Strategy games like chess or checkers, Hide and-seek etc. Norton and Norton (2002) illustrate the therapeutic stages of play therapy as follows-

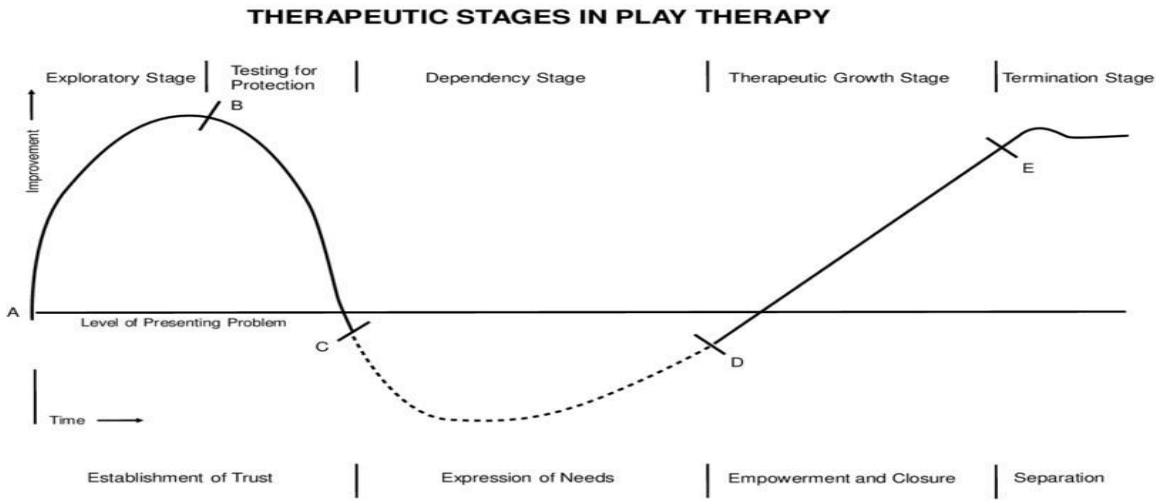

Fig 2. Therapeutic Stages of Play Therapy. Norton & Norton (2002) Cited by Parson et al. (2015) (Source: https://www.researchgate.net/publication/282790663_Play_Therapy)

1.3.0 Aggression Regulation

Aggression regulation is a vital aspect of human behaviour that plays a crucial role in maintaining social order and preventing harm. It encompasses a range of psychological processes and strategies aimed at managing and controlling aggressive tendencies and impulses. In this context, aggression refers to behaviour intended to cause harm or discomfort to others, whether it's physical, verbal.

The need for effective aggression regulation arises from the fact that everyone experiences anger,

frustration, or irritation at some point in their lives. Without proper regulation, these intense emotions can lead to destructive and harmful actions, both towards oneself and others. Therefore, learning how to navigate and channel these emotions in a constructive way is essential for personal well-being and maintaining positive relationships.

Aggression regulation involves a multifaceted approach that includes understanding the triggers of aggressive behaviour, developing emotional self-awareness, employing coping strategies, and practicing effective communication and conflict resolution skills. By mastering these techniques, individuals can enhance their ability to respond to challenging situations in a non-violent and socially acceptable manner.

Individual with down syndrome like anyone else can experience frustration, it is important to reorganise the aggression and frustration is a universal human emotion and It is not exclusive to people with down syndrome, however individual with down syndrome may face certain challenges like communication challenges, cognitive difference, social interactions, Sensory sensitivity which may lead the aggressive behaviour among them.

This area of study is of great interest to psychologists, therapists, educators, and anyone interested in promoting a more peaceful and harmonious society. Through research and practical application, the field of aggression regulation seeks to provide individuals with the tools and knowledge needed to manage their emotions and behaviour in ways that foster healthier relationships and contribute to a more peaceful coexistence.

1.4.0 Attention Span

Attention span is a measure of how long someone can focus on a single task, thinking, or conversation without getting distracted. The attention span measures how readily a person is distracted, and greater attention spans normally make it easier for people to accomplish activities and stay organized. The attention span of a person also influences social interactions; some people struggle to stay focused on talks without becoming distracted. The length of a person's attention span varies depending on the situation and the type of job. Some people can concentrate longer on particular types of activity, such as games, reading, or discussions.

A range of mental health disorders, such as depression, anxiety, and ADHD, can have an impact on a

person's performance. Attention span variety of mental health conditions, including depression, anxiety, and ADHD can affect a person's ability to focus. A combination of psychotherapy, lifestyle changes, and in some cases, medication can help improve a person's attention span. Some people need to institute specific strategies, such as taking frequent breaks or turning off electronics, to remain focused (Bradbury, 2016). In 2015, a study commissioned by Microsoft and discussed in Time magazine found that the average attention span was in fact only 8 s. If indeed this is the case, then even participating in a 15-min lecture would be positively heroic. To place this in perspective, it was reported in the same Time article, that goldfish, of the piscine rather than snack variety, have an attention span of 9 seconds, one whole second greater than humans!

1.5.0 Self- help skills

Self-help skills are a collection of critical life skills that enable youngsters to complete daily chores on their own. Dressing, eating, hygiene, and other personal care duties that foster independence and self-reliance are examples of these abilities.

Dressing: Children can learn to put their garments on and take them off, including buttons, zippers, and shoelaces. Hygiene: Children can learn to independently wash their hands, brush their teeth, and take a bath or shower. Feeding: Children can learn to use utensils, pour liquids, and clean up after themselves. Tidying up: Children may learn to put their toys, clothing, and other belongings in their proper locations. Communication: Children can learn to express their needs, wants, and feelings using words and gestures. self-help skills are important for children to develop because a child must eventually be able to complete complex tasks on their own. While children have a natural desire to learn additional self-help skills and grow their abilities, it is important to remember that all children learn at a different pace.

2.0.0 EMERGENCE OF THE STUDY

In recent years, Down syndrome has become more common, and children with Down syndrome are living longer. Researcher want to do her research work with down syndrome. Children with down syndromes are the least, lowest and lost section of the society. With her research, Researcher want to develop the play therapy for them. Down syndrome continues to be the most common chromosomal disorder. (Centres for disease control and prevention) states some data and statistics on down syndrome is that, each year, about 6,000 babies are born with Down syndrome, which is about 1 in every 700

babies born. Between 1979 and 2003, the number of babies born with Down syndrome increased by about 30%. Researchers estimated that in 2008 about 1 out of every 1,200 people (children, teens, and adults) living in the United States had Down syndrome. This means that in 2008 about 250,700 children, teens, and adults were living with Down syndrome in the United States, but in India there are large number of populations is suffering from this syndrome based on surveys carried out at field level around 23000 to 29000 children are born with this syndrome every year (Toshi, 2023).

Children with Down syndrome often struggle with maintaining attention, regulating aggression or impulsive behaviour, and developing self-help skills, which are essential for their daily lives and social interactions. Play therapy is an established therapeutic approach that can help address these challenges in a child-friendly and engaging manner.

It is essential for enhancing children with Down syndrome's overall well-being and fostering their growth to recognize and cater to their needs. Despite investigations into a number of therapies, play therapy's unique advantages in this situation are still undiscovered. By examining the effects of play therapy on three crucial areas- aggression regulation, attention span and self-help skills—this study tries to close that gap.

Intervention option can improve the quality of life of these children and their families. It is essential to explore therapeutic interventions that are not only effective but also safe and ethical. Play therapy is generally considered a non-invasive and ethical approach that respects the child's dignity and autonomy, making it a suitable focus for research in this context (NEP, 2020).

Some research questions come up in researcher’s mind.

1. Is there any effect of play therapy on children with down syndrome?
2. What will be the effect of play therapy on aggression regulation in the children with down syndrome?
3. What will be the effect of play therapy on attention span of the children with down syndrome?
4. What will be the effect of play therapy on self-help skills among the children with down syndrome?

3.0.0 JUSTIFICATION OF THE STUDY

Down syndrome is a genetic condition that affects cognitive and behavioural development in children. It is characterized by intellectual disabilities, which can impact impulse control, attention span, and self-

help skills. Therefore, investigating interventions like play therapy for children with Down syndrome is important, as it directly addresses their specific needs. Children with Down syndrome often struggle with maintaining attention, regulating aggression or impulsive behaviour, and developing self-help skills, which are essential for their daily lives and social interactions. Play therapy is an established therapeutic approach that can help address these challenges in a child-friendly and engaging manner.

While there is some research on play therapy for various developmental and behavioural issues in children, there may be a gap in the literature regarding its specific effectiveness for children with Down syndrome. Therefore, this study aims to fill this gap by focusing on this particular population and their unique needs.

There are some researches which were already done in the field of children with down syndrome, like "Path learning individuals with down syndrome: "The challenge of learning condition and cognitive abilities (2021)" by Meneghettri. C, Toffalin. E and Carretti. B, "The effect of individualised education programme on the functional skills among the children with down syndrome" (2020) by Devi. R, "Study of cognitive deficits and depression in adult with down syndrome" (2020) by Reddy. S and "Effect of selective physical activities on the gross motor skills of children with down syndrome" (2021) by Jesudas. S, but researcher find some gaps, these researches were conducted on different variables, age groups and countries, on that basis researcher decided to do research in this area with some other variables "Play therapy, Aggression Regulation, Attention Span and Self -Help Skills".

The outcomes of this research can have practical implications for parents, caregivers, educators, and therapists working with children with Down syndrome. If play therapy is found to be effective, it could provide an evidence-based.

The title encompasses a range of important domains, including aggression regulation (essential for social functioning), attention span (which is crucial for learning) and self-help skills (critical for daily living). By addressing these areas, the study aims to contribute to the holistic development of children with Down syndrome. Intervention option that can improve the quality of life for these children and their families. It is essential to explore therapeutic interventions that are not only effective but also safe and ethical. Play therapy is generally considered a non-invasive and ethical approach that respects the child's dignity and autonomy, making it a suitable focus for research in this context (NEP, 2020).

The title "Effectiveness of Play Therapy on Attention Span, Aggression Regulation, and Self-help Skills among Children with Down Syndrome" is justified because it addresses a significant gap in research, is highly relevant to the unique needs of children with Down syndrome, and has the potential to yield practical insights that can benefit both individuals with Down syndrome and the professionals who support them.

3.0.0 STATEMENT OF THE STUDY

Effectiveness of play therapy on attention span, aggression regulation and self-help skills among the children with down syndrome.

4.0.0 DEFINITIONS OF THE VARIBALES

4.1.0 Play therapy

Play therapy is defined as the systematic use of a theoretical model that establishes an interpersonal process, in which trained therapists use the therapeutic power of play to help children prevent or resolve psychosocial difficulties and achieve optimal growth. Play therapy is a form of psychotherapeutic approach of the children and a psycho-diagnostic tool. (Association for play therapy board, march 1997).

Operational definition- Play therapy consists of several play techniques that will be utilised to specifically work on children's attention span, aggression regulation and self-help abilities.

4.2.0 Aggression Regulation

According to Achterberg et. al., (2016) aggression regulation refers to the process of managing and controlling aggressive behaviours in a way that is socially acceptable and does not lead to harm or violence. It involves strategies and techniques aimed at preventing or mitigating aggressive outbursts and promoting more constructive and non-violent ways of dealing with conflicts, frustrations, or emotional triggers. The goal of aggression regulation is to ensure that individuals can interact with others in a safe and respectful manner, maintaining social harmony and reducing the potential for harm or disruption.

Operational definition- The practise of regulating and limiting violent conduct in order to avoid harming oneself or others is referred to as aggression regulation. It entails methods and tactics designed to channel irrational emotions like anger, frustration, or hatred into something positive and socially acceptable.

4.3.0 Attention Span

According to Singh (2017) Attention span, as measured by sustained attention, or the time spent continuously on a task, varies with age. Older children are capable of longer periods of attention in a task than younger ones. Attention span is the time a teacher is more likely to maintain the child's attention and limit inappropriate behaviour during this period effectively.

Operational Definition- The ability to focus one's thoughts and interest on something for an extended period of time is known as attention span. Typically, it is between two and three times the age of the individual.

4.4.0 Self -help skills

According to Medeshova (2016) In psychology, the term "self-help skills" refers to a collection of methods, approaches, and practises that people can use independently to enhance their mental health, general wellbeing, and quality of life. These abilities enable people to take charge of their emotional and psychological health. Self-help can be a useful addition to professional mental health treatment when necessary and can promote personal development and self-improvement.

Operational definition- Self-help abilities are a collection of basic life, personal management skills and social skills that enable children to handle routine tasks on their own. These abilities include the ability to feed oneself, dress oneself, manage one's hygiene, and do other personal care tasks and able to communicate with others.

5.0.0 OBJECTIVES OF THE STUDY

- To develop the intervention-based play therapy for children with down syndrome.
- To study the effect of play therapy on aggression regulation among the children with down syndrome.
- To study the effect of play therapy on attention span among the children with down syndrome.
- To study the effect of play therapy on self -help skills among the children with down syndrome.

6.0.0 HYPOTHESES OF THE STUDY

- $Ha_{1:}$ There will be significance effect of play therapy on aggression regulation among the children with down syndrome.
- $Ha_{2:}$ There will be significance effect of play therapy on attention span among the children with

down syndrome.

- Ha_3: There will be significance effect of play therapy on self-help skills among the children with down syndrome.

7.0.0 VARIABLES OF THE STUDY

- Independent variable: Play therapy
- Dependent variable: Aggression Regulation, Attention Span and Self-help Skills.
- Control variable: Age, Any other physical and psychological issues other than Down Syndrome.

8.0.0 DELIMITATION OF THE STUDY

The study will be delimited to:

- Agra city only
- Down Syndrome Children
- Age group- 12-16.

9.0.0. RESEARCH DESIGN

Table No 1. Research Design

PRE-TEST PHASE AND RAPPORT BUILDING PHASE	Check the level of Aggression regulation, Attention span and Self-help skills. Initially researcher will build the rapport among the children with down syndrome, through conducting some activities with them so that they can feel comfortable with the researcher.
INTERVENTION PHASE	PHASE 1ST INTERVENTION (2 MONTHS) + FEEDBACK FROM STAKEHOLDERS.
(8 months)	PHASE 2ND INTERVENTION (2 MONTHS) + FEEDBACK FROM STAKEHOLDERS. PHASE 3RD INTERVENTION (2MONTHS) + FEEDBACK FROM STAKEHOLDERS. PHASE 4TH INTERVENTION (2 MONTHS) + FEEDBACK FROM STAKEHOLDERS.
POST TEST PHASE	Check the level of Attention span, aggression regulation and self-help skills after intervention.

9.1.0 INTERVENTION BASED ON PLAY THERAPY

Play therapy will be use to address the unique difficulties faced by kids with Down syndrome by utilizing the inherent advantages of play. Through play, researcher will foster a nurturing and enriching atmosphere that benefits the child's growth and wellbeing in a variety of ways. A strategy known as play therapy makes use of play activities to accomplish researcher's objectives while also acknowledging the significance of play in a child's development. Including play therapy in treatments for kids with Down syndrome serves a number of goals. Purpose of these activities are to facilitating communication, Enhancing, Aggression Regulation, Attention Span, developing social skills, promoting self-help skill, Building Emotional Regulation and to foster positive relationship. Main purpose of this intervention is to make them independent and self-reliant.

These are the example of play activities which would be use by researcher in her intervention. Researcher will prepare more plays for other phases after taking the feedback from the stakeholders, and with the help of play therapist.

1. Favourite colour ball: Researcher will distribute a piece of papers and colours to each child and tell them to dip their figure in their favourite colour and put that colour on that piece of paper. Then show that coloured paper to everyone, one by one. now children will make a ball of that pieces by crushing them together, now researcher will open that ball one by one children have to guess whose favourite colour is opening. This activity will develop friendship, increase communication, develop socialisation.

2. Glitter rub: Researcher will put few drops of eatable oil on the children's hands then spread the eatable glitter on their hands tell them to rub their hands. now ask them to wipe their hands but after wipe their hands are not clean then researcher will tell them to wash their hands with soap .so that, this activity will help them to develop the hygiene habits among the children with down syndrome.

3. Coloured egg: Take some boiled eggs dipped them into yellow coloured water for 24 hours, then after 24 hours. tell children to check the colour of the eggs, eggs would be converted in yellow colour, then researcher will clean the eggs with toothpaste. Through this activity children would be aware about the importance of clean their teeth's every day.

4.Pop the colour: Researcher will prepare a colours-based activity, she will write the colour's name with different colour ask them to tell which colour's name is written. It will boost their attention span and

concentration.

5.Number Guess: Researcher will prepare a chart of 10 columns in these columns researcher will paste 10 images then show that chart to children for 20 minutes. now researcher will hide these images with numbers then she will show images on screen one by one ask them, on which number that image was pasted. this would increase their attention span and memory.

6. Blow the bubble: Some children will instruct to pop as many bubbles as possible. Others have opportunity to grip, stomp on and bust the bubbles. It will be fun to blow the bubble and reduce the aggressive nature.

10.0.0 METHODOLODY OF THE STUDY

10.1.0 Method of the study

For accomplishment of the objectives of the present research methodology will be Quasi experimental-One Group Pretest-Post-test Design will be used. An experimental or study strategy known as one group pretest-post-test is employed in a number of disciplines, including psychology, education, and the social sciences. Participants are measured or evaluated before and after receiving an intervention or treatment in this simplified before-and-after measurement design.

10.2.0 Research Approach

A Mixed-methods research technique will be applied in this study to gather, analyse, and integrate data from both qualitative and quantitative research methodologies, such as surveys and experiments and focus groups and interviews, researcher will take thematic interview.

10.3.0 Sample of the study

The present study researcher will adopt the purposive sampling method for the selection of sample, Institute and sample units. Sample units will depend upon the availability of sample at the time of intervention, approx. 30 from Chirag Special School for Special Children, Agra, Uttar Pradesh.

10.4.0 Tools of the study

For the measurement of aggression regulation among the children with down syndrome researcher will construct the tool “scale on Aggression regulation” with these 5 dimensions 1. Physical Aggression 2. Verbal Aggression 3. Anger 4. Hostility 5. Indirect Aggression.

For the measurement of attention span among the children with down syndrome, researcher will conduct

schedule for the observation and questionnaire fore quantitative analysis.

For the measurement of level of self- help skills among the children with down syndrome researcher will construct the tool "scale on self-help skill" there will be 4 dimensions under that tool 1. Independent dressing and grooming, 2. Personal hygiene, 3. Helping with daily chores, 4. Social relationships. Nature of the tool will be close ended questionnaire; structure of tool will be 4-point Likert scale.

10.5.0 Statistical Technique of the study

In the current study, the researcher will choose a measure for parametric statistics for the quantitative analysis of the data collected or employ the t-test in the case when the data meets the parametric test assumption. Additionally, researcher will use case study for the extraordinary children.

Table No. 2 Outline of Methodology

Methodology	
Research Design	One Group Pre-test- Post-test Design
Research Approach	Mix Method Approach
Sampling Procedure	Institute Selection (through Purposiv Sampling) . Chirag Special School for Special Children, Agra, Uttar Pradesh
Sample and Sample Units (Purposive Sampling)	• Sample selection: Children with Down Syndrome. • Sample Units: N= 30, Age Group: Between12 to 16
Research Treatment	Rapport Building: For Two Weeks. Intervention: By Play Therapy for 8 Months.
Administration of Tools	• Self-Constructed Tools- 1. Scale on Aggression Regulation. Dimensions: Physical Aggression 2. Verbal Aggression 3. Anger 4. Hostility 5. Indirect Aggression.
	2 Scale For Attention Span. Nature of the tool: Close ended questionnaire and schedule for Observation. 3. Scale on Self-Help Skills Dimensions. (Dimensions- 1. Independent dressing and Grooming. 2. Personal hygiene. 3. Daily chores. 4. Social relationship). Nature of the tool: Close ended questionnaire. Structure: 3 Point Likert scale.
Statistical Techniques	Descriptive: Mean, S.D and Graphical representation. Inferential: t-Test.

11.0.0 SIGNIFICANCE OF THE STUDY

For Parental: The research will empower parents of children with Down syndrome by revealing practical tips for fostering their child's development. For creating a happy and encouraging home atmosphere, this knowledge will be helpful.

For Research Literature: The title adds to the larger body of knowledge regarding therapies for people with Down syndrome. By adding actual data to the corpus of existing knowledge, it will strengthen the groundwork for future studies and advances our understanding of the most efficient therapeutic strategies for this population.

For Therapist: The study's conclusions will help experts in designing intervention strategies specifically for kids with Down syndrome. This would be essential for maximizing therapeutic strategies and guaranteeing that interventions would not only efficient but also catered to the special requirements of people with Down syndrome.

For Education: Because schooling is a crucial component of a child's development, the study has implications for teachers and educational organizations that support students with Down syndrome. The creation of inclusive and productive learning environments would be aided by understanding the possible advantages of play therapy in education for special and normal children.

For Quality-of-Life Down Syndrome: Understanding how to play therapy will positively impact aggression regulation, attention span and self- help skills implication for improving the overall quality of life for children with down syndrome. this research will be contributed to enhancing the well- being and daily functioning of the individuals.

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